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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,841	09/12/2003	C. Steven Smith	AL130/00AL1-U	7875

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STITES & HARBISON, PLLC
400 W MARKET ST
SUITE 1800
LOUISVILLE, KY 40202-3352

EXAMINER	
SHEIKH, HUMERA N	

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/660,841	SMITH, C. STEVEN	
	Examiner	Art Unit	
	Humera N. Sheikh	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) *46-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Humera N. Sheikh
HUMERA N. SHEIKH
PATENT EXAMINER
TC-1600

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/15/03;07/12/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

Receipt of the Response to Restriction/Election requirement filed 04/05/06 and the Information Disclosure Statements (2-total) filed 12/15/03 & 07/12/04 is acknowledged.

Applicant's election with traverse of Group I (claims 1-45) in the reply filed on 04/05/06 is acknowledged. Examiner also acknowledges Applicant's request to rejoin method claims 46-63 upon allowance of the elected composition claims (1-45).

Claims 46-63 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 04/05/06.

Claims 1-63 are pending in this action. Claims 46-63 have been withdrawn. Claims 1-45 are rejected.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite the 'treatment and/or prevention of an upper airway condition...'. The term 'prevention' renders the claims non-enabling. It is suggested that the term 'prevention' be deleted.

The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in In re Wands, 8 USPQ2d 1400 (Fed. Cir. 1988). Among these factors are: (1) the nature of the invention; (2) the state of the prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary. When the above factors are weighed, it is the examiner's position that one skilled in the art could not practice the invention without undue experimentation

(1) The nature of the invention/(5) The breadth of the claims:

The invention is directed to a composition useful for the non-addictive treatment and/or prevention of an upper airway condition in a subject, the composition comprising effective amounts of a suitable nasal decongestant; a suitable corticosteroid; and a suitable anticholinergic agent.

(2) The state of the prior art:

The prior art teachings provide for pharmaceutical compositions for treating upper airway or upper respiratory conditions, whereby the compositions comprise a combination of decongestants, anticholinergic agents, corticosteroids, antihistamines, anti-infectives and the like. The compositions can be in various forms, which include, liquids such as solutions, suspensions, aerosol formulations and the like (see for instance, Osbakken *et al.* – U.S. Publn. No. 2002/0061281 A1).

(3) The relative skill of those in the art:

The relative skill of those in the art is high.

(4) The predictability or unpredictability of the art:

The unpredictability of the art is high.

(6) The amount of direction or guidance presented:

The specification filed 09/12/03 discloses 'treatment or prevention' of upper airway conditions comprising a suitable decongestant, corticosteroid and an anticholinergic agent. While similar prior art formulations recognize compositions for treating upper airway conditions comprising administration of decongestants, anticholinergic agents, corticosteroids, antihistamines, anti-infectives and the like, the prior art does not recognize "prevention" of upper airway conditions. It is unclear to the Examiner as to how the instant composition 'prevents' upper airway conditions, whilst prior art formulations, which incorporate the same components as claimed by Applicant, only provide for the 'treatment' of upper airway conditions. The specification while providing guidance for the 'treatment' of upper respiratory conditions, does not provide any direction or guidance for the 'prevention' of upper respiratory conditions.

(7) The presence or absence of working examples:

The working examples are insufficient to establish the instant 'prevention' of upper airway conditions. The working examples merely establish that the instant compositions can be used to alleviate or treat respiratory conditions, but not prevent them. Therefore, the working examples are insufficient to establish the instant composition used to 'prevent' upper airway disorders.

(8) The quantity of experimentation necessary:

The instant invention provides for a composition useful for the non-addictive treatment and/or prevention of an upper airway condition in a subject, the composition comprising effective amounts of a suitable nasal decongestant; a suitable corticosteroid; and a suitable anticholinergic agent. When the above factors are weighed together, it is the position of the Examiner that the instant invention would require 'undue' and painstaking experimentation to arrive at the instant invention to determine how the 'prevention' of upper airway conditions would be carried out.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 6, 8-10, 13, 26, 29, 30 and 33-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Osbakken *et al.* (U.S. Pat. Publication No. 2002/0061281 A1).

The instant invention is drawn to a composition useful for the non-addictive treatment and/or prevention of an upper airway condition in a subject, the composition comprising effective amounts of a suitable nasal decongestant; a suitable corticosteroid; and a suitable anticholinergic agent.

Osbakken *et al.* ('281) disclose pharmaceutical compositions that comprise one or more active ingredients selected from the group consisting of anti-infective agents, anti-inflammatory agents (including steroidal and non-steroidal anti-inflammatory agents), mucolytic agents, anthistamines, antileukotrienes, decongestants, anticholinergic agents, antifungal agents and a combination of these classes of agents (see reference page 6, ¶ 69); (Table 1 at pp. 15-17). The compositions are formulated as a liquid (solution, suspension, emulsion, etc.) or a powder that can be mixed with a diluent to produce a liquid for administration to the nasal sinuses. The formulations can be used in the treatment of sinusitis (page 6, ¶ 70).

Suitable steroidal anti-inflammatories disclosed include: betamethasone, triamcinolone, dexamethasone, prednisone, mometasone, fluticasone, beclomethasone, flunisolide and budesonide. The anti-inflammatories have a wide range of inhibitory activities against multiple cell types (e.g., leukotrienes, cytokines) (pg. 10, ¶ 138-145).

Suitable decongestants disclosed include: phenylpropanolamine, pseudoephedrine, phenylephrine, epinephrine, ephedrine and oxymetazoline (pg. 6 ¶ 74; pg. 10 ¶ 146-150).

Suitable anticholinergics disclosed include: ipratropium, atropine and scopolamine (pg. 6 ¶ 74; pg.10 ¶ 156-159).

Leukotriene receptor antagonists are also disclosed and include: zafirlukast, montelukast, pranlukast, iralukast and pobilukast (pg.9 ¶ 124-126).

Antihistamines are also disclosed and include: diphenhydramine, astemizole and terfenadine (pg. 9 ¶ 128-131).

Anti-infective agents are disclosed and include: penicillins, cephalosporins, macrolides, ketolides, sulfonamides and the like (pg. 11 ¶ 170).

Cromolyn and nedocromil sodium are disclosed at Table 1 (pp. 16-17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 5, 6 and 8-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osbakken *et al.* (U.S. Pat. Publication No. 2002/0061281 A1).

The instant invention is drawn to a composition useful for the non-addictive treatment and/or prevention of an upper airway condition in a subject, the composition comprising effective amounts of a suitable nasal decongestant; a suitable corticosteroid; and a suitable anticholinergic agent.

Osbakken *et al.* ('281), as delineated above, teach pharmaceutical compositions that comprise one or more active ingredients selected from the group consisting of anti-infective agents, anti-inflammatory agents (including steroidal and non-steroidal anti-inflammatory agents), mucolytic agents, anthistamines, antileukotrienes, decongestants, anticholinergic agents, antifungal agents and a combination of these classes of agents (see reference page 6, ¶ 69); (Table 1 at pp. 15-17). The compositions are formulated as a liquid (solution, suspension, emulsion, etc.) or a powder that can be mixed with a diluent to produce a liquid for administration to the nasal sinuses. The formulations can be used in the treatment of sinusitis (page 6, ¶ 70).

Suitable steroidal anti-inflammatories taught include: betamethasone, triamcinolone, dexamethasone, prednisone, mometasone, fluticasone, beclomethasone, flunisolide and budesonide. The anti-inflammatories have a wide range of inhibitory activities against multiple cell types (e.g., leukotrienes, cytokines) (pg. 10, ¶ 138-145).

Suitable decongestants taught include: phenylpropanolamine, pseudoephedrine, phenylephrine, epinephrine, ephedrine and oxymetazoline (pg. 6 ¶ 74; pg. 10 ¶ 146-150).

Suitable anticholinergics taught include: ipratropium, atropine and scopolamine (pg. 6 ¶ 74; pg.10 ¶ 156-159).

Leukotriene receptor antagonists are also disclosed and include: zafirlukast, montelukast, pranlukast, iralukast and pobilukast (pg.9 ¶ 124-126).

Antihistamines are also disclosed and include: diphenhydramine, astemizole and terfenadine (pg. 9 ¶ 128-131).

Anti-infective agents are disclosed and include: penicillins, cephalosporins, macrolides, ketolides, sulfonamides and the like (pg. 11 ¶ 170).

Cromolyn and nedocromil sodium are disclosed at Table 1 (pp. 16-17).

With regards to the instantly claimed amounts and/or ranges, Osbakken *et al.* do not explicitly teach the claimed amounts and/or ranges. However, the Examiner points out that generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller,* 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In this instance, prior art teaches

the incorporation of the same components, particularly, decongestants, corticosteroids and anticholinergics for use in the same field of endeavor and to treat the same disorders, such as upper respiratory conditions, as claimed by Applicant. Moreover, it is deemed obvious to one of ordinary skill in the art to determine suitable or effective amounts/ranges through the use of routine or manipulative experimentation to obtain the best possible results, as these are indeed variable parameters attainable within the art. Furthermore, Applicants have not demonstrated any unexpected and/or superior results attributable to the claimed amounts/ranges. The prior art vividly recognizes and teaches suitable pharmaceutical compositions for effectively treating respiratory disorders and conditions.

Given the teachings of Osbakken *et al.* it is the position of the Examiner that the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Claims 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osbakken *et al.* (U.S. Pat. Publication No. 2002/0061281 A1) as applied to claims 1, 2, 5, 6 and 8-43 above and further in view of Gray (U.S. Pat. No. 5,698,558).

The instant invention is drawn to a composition useful for the non-addictive treatment and/or prevention of an upper airway condition in a subject, the composition comprising effective amounts of a suitable nasal decongestant; a suitable corticosteroid; and a suitable anticholinergic agent.

Osbakken *et al.* ('281), as delineated above, teach pharmaceutical compositions that comprise one or more active ingredients selected from the group consisting of anti-infective agents, anti-inflammatory agents (including steroidal and non-steroidal anti-inflammatory agents), mucolytic agents, anthistamines, antileukotrienes, decongestants, anticholinergic agents, antifungal agents and a combination of these classes of agents (see reference page 6, ¶ 69); (Table 1 at pp. 15-17). The compositions are formulated as a liquid (solution, suspension, emulsion, etc.) or a powder that can be mixed with a diluent to produce a liquid for administration to the nasal sinuses. The formulations can be used in the treatment of sinusitis (page 6, ¶ 70).

Osbakken *et al.* teach upper airway conditions, such as sinusitis. Osbakken *et al.* do not explicitly teach rhinitis and pharyngitis.

Gray ('558) teaches compositions comprising cetirizine that are useful in treating allergic rhinitis and pharyngitis (see reference column 1, lines 10-33); (col. 2, lines 14-38). The compositions possess potent activity in treating seasonal and perennial allergic rhinitis and avoid adverse anticholinergic effects, gastrointestinal disturbance, headaches and cardiovascular effects (col. 1, lines 13-33). The reference recognizes that allergic rhinitis is characterized by symptoms such as pharyngitis. The reference also teaches that, for most patients, topical corticosteroids provide relief from rhinitis symptoms (col. 2, lines 31034). The compositions include suspensions, solutions, elixirs, aerosols or solid dosage forms (col. 7, lines 15-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the rhinitis- and pharyngitis- treating compositions taught by Gray

within the pharmaceutical compositions of Osbakken *et al.* One of ordinary skill in the art would be motivated to do so with a reasonable expectation of success because Gray explicitly teaches that the compositions comprising cetirizine are effective for treating (allergic) rhinitis, as well as symptoms arising from (allergic) rhinitis, such as pharyngitis and also teach that the compositions avoid any adverse effects, such as anticholinergic effects. The expected result would be an improved pharmaceutical composition that is beneficial for treating various upper respiratory conditions in a subject.

Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osbakken *et al.* (U.S. Pat. Publication No. 2002/0061281 A1) as applied to claims 1, 2, 5, 6 and 8-43 above and further in view of Fust (U.S. Pat. No. 6,344,210).

The instant invention is drawn to a composition useful for the non-addictive treatment and/or prevention of an upper airway condition in a subject, the composition comprising effective amounts of a suitable nasal decongestant; a suitable corticosteroid; and a suitable anticholinergic agent.

Osbakken *et al.* ('281), as delineated above, teach pharmaceutical compositions that comprise one or more active ingredients selected from the group consisting of anti-infective agents, anti-inflammatory agents (including steroidal and non-steroidal anti-inflammatory agents), mucolytic agents, anthistamines, antileukotrienes, decongestants, anticholinergic agents, antifungal agents and a combination of these classes of agents (see reference page 6, ¶ 69); (Table 1 at pp. 15-17). The compositions are formulated as a liquid (solution, suspension, emulsion, etc.) or a powder that can be mixed with a diluent to produce a liquid for

administration to the nasal sinuses. The formulations can be used in the treatment of sinusitis (page 6, ¶ 70).

Osbakken *et al.* do not teach an aromatic agent (*i.e.*, camphor, menthol, eucalyptus).

Fust ('210) teaches compositions for freshening nostrils and sinus cavities comprising aromatic agents such as menthol and eucalyptol (see reference column 1, line 20 – col. 2, line 52); (col. 4, lines 5-10); (col. 8, lines 24-27) and Examples.

Fust teaches that the freshening ingredients of the composition leaves the nose and sinuses feeling cleansed, cleared and refreshed with a minty after-taste (col. 21-25).

The compositions are especially effective for persons with sinusitis and rhinitis, which result in a temporary loss of smell; the same effect that may stem from a number of allergies, all of which are associated with nasal congestion (col. 2, lines 42-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate aromatic agents, such as menthol and eucalyptol as taught by Fust within the pharmaceutical compositions of Osbakken *et al.* One of ordinary skill in the art would be motivated to do so with a reasonable expectation of success because Fust explicitly teaches that the freshening ingredients of the composition leaves the nose and sinuses feeling cleansed, cleared and refreshed with a minty after-taste, thus eliminating and masking objectionable odors. The expected result would be an aromatic-enhanced pharmaceutical composition that provides for cleaner and healthier nasal and sinus passageways.

Pertinent Art

Prior Art made of record, not relied upon and deemed relevant by Examiner:

- Sequeira *et al.* (U.S. Pat. No. 5,889,015)

  Sequeira *et al.* teach mometasone furoate for treating corticosteroid-responsive diseases of the surfaces of upper and/or lower airway passages and/or lungs, e.g. allergic rhinitis (see Abstract).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday through Friday from 8:00A.M. to 5:30P.M., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Humera N. Sheikh

Patent Examiner

Art Unit 1615

June 12, 2006

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